Claims

1. Coated platelet-shaped carrier material, characterized in that the carrier material is composed of an inorganic substrate and is provided with at least one coating, each layer comprising at least one cured melamine-formaldehyde resin or being composed of such a resin.

2. Coated platelet-shaped carrier material according to Claim 1, characterized in that the inorganic carrier material is selected from the group consisting of mica, silica flakes, glass flakes, pearlescent pigments, metal flakes and metal foils.

3. Coated platelet-shaped carrier material according to Claim 1 or 2, characterized in that the metal flakes or metal foils are composed of silver, copper, nickel, gold, aluminium or alloys of these metals.

4. Coated platelet-shaped carrier material according to Claim 1, 2 or 3, characterized in that the inorganic substrate has a metallic coating.

5. Coated platelet-shaped carrier material according to Claim 4, characterized in that the metallic coating is composed of silver, copper, nickel, gold, aluminium or alloys of these metals.

6. Coated platelet-shaped carrier material according to one or more of Claims 1 to 5, characterized in that the cured melamine-formaldehyde resin comprises one or more organic or inorganic dyes and/or one or more organic or inorganic UV absorbers, the dyes being soluble in the medium in which the pigment is coated.

7. Coated platelet-shaped carrier material according to Claim 6, characterized in that the dye or dyes is or are present in one or more inner layers comprising

melamine-formaldehyde resin and the UV absorber or absorbers is or are present in one or more outer layers comprising melamine-formaldehyde resin.

8. Coated platelet-shaped carrier material according to one or more of Claims 1 to 7, characterized in that substantially spherical cured melamine-formaldehyde resin particles which comprise one or more dyes and/or one or more UV absorbers or else are free from dyes and/or UV absorbers are additionally applied to the outermost coating.

9. Coated platelet-shaped carrier material according to one or more of Claims 1 to 8, characterized in that the cured melamine-formaldehyde resin of the outermost layer is modified with functional groups.

10. Coated platelet-shaped carrier material according to Claim 9, characterized in that the functional groups which modify the outermost layer are introduced by way of amino-functional compound which in addition to the amino group contains one or more further functional group, this amino-functional compound participating in the polycondensation reaction between melamine and formaldehyde and being incorporated into the melamine-formaldehyde network by way of the amino function, with the functional groups brought to the surface in this way being modified further where appropriate.

11. Coated platelet-shaped carrier material according to Claim 9, characterized in that the cured melamine-formaldehyde resin of the outermost layer is surface-functionalizing modified with compounds reactive towards hydroxyl and/or amino groups by way of the methylolamine or amino groups present in the said resin.

12. Coated platelet-shaped carrier material according to one or more of Claims 6 to 11, the melamine-

formaldehyde resin comprising as dyes at least one fluorescent dye and one further, optionally fluorescent dye, the further dye being present in an amount which gives the pigment essentially no colour or fluorescence when this dye is used alone.

13. Process for producing a singularly or multiply coated platelet-shaped carrier material, characterized in that it comprises, in the case of a single coating,
a first step in which an inorganic platelet-shaped substrate is suspended in a basic aqueous medium, comprising melamine and formaldehyde and/or methylolunelamine, which may optionally have been alkoxylated, and
a second step in which crosslinking of the organic constituents is brought about by lowering the pH into the acidic range, and,
in the case of a multiple coating,
repeating the first and second steps with the product of the preceding coating operation.

14. Process according to Claim 13, characterized in that some of the melamine is replaced by other crosslinking molecules from the group consisting of guanamines, phenols and ureas and/or some of the methylolunelamine is replaced by corresponding guanamine, phenol or urea analogues.

15. Process according to Claim 13 or 14, characterized in that, before the onset of or during crosslinking, organic or inorganic dyes and/or organic or inorganic UV absorbers are added.

16. Process according to Claim 15, characterized in that dyes added comprise at least one fluorescent dye and one further, optionally fluorescent dye, the further dye being added in an amount which gives the pigment essentially no colour or fluorescence when this dye is used alone.

17. Process according to one or more of Claims 13 to 15, characterized in that the lowering of the pH into the acidic range is brought about by oxidation of excess and/or unreacted formaldehyde and/or formaldehyde present in the methylolunelamines, by means of hydrogen peroxide.

18. Process according to one or more of Claims 13 to 17, characterized in that in the final coating step, in addition to melamine and formaldehyde and/or methylolunelamine, an amino-functional compound which in addition to the amino group contains one or more functional groups participates in the polycondensation reaction, the amino-functional compound being incorporated into the melamine-formaldehyde network by way of the amino function, and with the functional groups brought to the surface in this way being modified further where appropriate.

19. Process according to one of or more of Claims 13 to 17, characterized in that the cured melamine-formaldehyde resin of the outermost layer is reacted by way of the methylolamine or amino groups present on its surface with compounds which contain a group which is reactive towards hydroxyl and/or amino groups, in addition to one or more further functional groups.

20. Use of one or more of the coated platelet-shaped carrier materials of Claims 1 to 12 as effect pigments in paints, varnishes, printing inks, plastics, powder coating materials, for colouring seed, in cosmetic formulations and/or for pigmenting foods.

21. Use according to Claim 20 for the purpose of marking and/or coding products.

22. Compositions comprising one or more of the coated platelet-shaped carrier materials of Claims 1 to 12 as effect pigment.